

### Abstract of the Disclosure

A balloon angioplasty catheter having a balloon head assembly carried at the distal end of an elongated catheter body. The balloon head assembly includes an inflatable  
5 balloon envelope and a perfusion lumen extending through the balloon envelope to provide a blood flow passage during inflation of the balloon envelope. The invention also encompasses embodiments having a collapsible guidewire lumen for increasing perfusion blood flow upon guidewire withdrawal.  
10 Also within the scope of the invention is a distally stepped down perfusion catheter, allowing for decreased distal cross section. In another preferred embodiment, the perfusion lumen is inflatable. In yet another embodiment, the guidewire lumen is external to the perfusion lumen.